

## REMARKS

Claims 1 – 7 and 13 – 19 are allowed.

Claims 8, 10, 20 and 22 have been amended. Claims 9 and 21 have been canceled. No claims have been added. Hence, claims 1 - 8, 10 – 20, 23 and 24 are pending in the Application.

Claims 8 – 13 and 20 - 24 are presumably rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 6,108,653, herein Pereira. The current Office Action states that the Applicant's arguments in the previous response are unpersuasive, states why the arguments are allegedly unpersuasive based on Pereira, and states that claims 8 – 13 and 20 - 24 are rejected, but does not explicitly state the basis of the rejection. Presumably, the rejections from the previous Office Action are incorporated and maintained in the current Office Action.

### CLAIMS 8 AND 20

Claims 8 and 20, as amended, recite (with markings showing current amendments):

inserting a first row piece of a spanning row into a first logical storage unit of said logical storage units;

wherein a certain data structure in each logical storage unit of said logical storage units is used to identify interested transactions and is not used to store any row of said each logical storage unit;

prior to inserting a second row piece of said spanning row into a second logical storage unit, determining whether one or more criteria is satisfied, wherein said one or more criteria include that said second logical storage unit has enough space allocated to allow the respective certain data structure to identify at least a threshold number of interested transactions...

Claims 8 and 20 describe steps for inserting row pieces of a spanning row in a way that conditions performance of the step on criteria that is based specifically on allocating enough space to identify a threshold number of interested transactions. Claims 8 and 20 have been

amended to clarify that the needed allocation of space is for a data structure that is not used for storing rows but is instead used to identify interested transactions. The cited art fails to disclose or suggest in any way these features.

Pereira teaches that a system wide variable PCTUSED is used to control whether a row is inserted into a particular block. "PCTUSED ... allows the DBA to control the row allocation of a DBMS table. The DBMS prevents additional rows to be placed in a block unless the percentage of that block has fallen below PCTUSED. PCTUSED is different from PCTFREE in the sense that although a block may be used if there is an update, it will not be used to insert a new row unless the percentage used in the block is below PCTUSED. Therefore, PCTFREE is used to maintain free space when the table is initially built, and PCTUSED determines whether a new row may be inserted in a block. The PCTUSED parameter comes into effect when used space becomes free due to deletes." (col. 4, lines 25 – 37)

Thus, Pereira teaches that criteria that controls insertion of a row into a block accounts for whether the total amount of space available in the block is below a threshold. Thus, while Pereira teaches a determination of whether to insert a row is based on criteria and a threshold that accounts for the total space available in the data block, nothing in Pereira suggests criteria or a threshold that accounts for space that allows a data structure, as claimed, to identify a threshold number of transactions. In fact, nothing in Pereira teaches of a data structure that is used to identify a number of interested transactions or that the number of transactions that can be identified by such a data structure is a factor to be considered for any sort of operation, much less the operation of inserting a row.

### **Response to Office Action Rebuttal**

The Office Action states that there is not a difference in concept between Pereira and claims 8 and 20. "Pereira's invention to insert the row based on the space available in the block

(condition), it is the similar concept as to present invention to insert the row based on the number of transactions (condition)." It is true that under both Periera and claims 8 and 20 the insertion of a row depends on a condition based on space in a logical storage unit. However, under Periera the condition is based on total space available in a block, while in claims 8 and 20 the condition is based on enough space being allocated to allow a data structure to identify interested transactions. By definition, the condition of Periera is conceptually different than that of claims 8 and 20.

In fact, in various scenarios a row may be inserted under Periera but not under claims 8 and 20. Therefore, the conditions can not be the same and must therefore be different.

An example of the difference between the way the system of Pereira inserts rows and a way an embodiment of claims 8 and 20 would insert rows is useful to illustrating differences between the conditions of Pereira and claims 8 and 20 that control insertion of rows. For purposes of illustration, assume that the database system described in Pereira is used to store data. The block contains at least one row piece of a spanning row. PCTUSED and PCTFREE are set to 50% of the free space in the datablock. The space allocated within the block to a data structure that identifies interested transactions must be sufficient to identify five transactions. Therefore, under Pereira the condition for inserting rows is that a database must have at least 50% free space, while under claims 8 and 20 the condition for inserting rows is that enough space should be allocated to allow the data structure to identify five transactions.

In the current example, a quarter of the space in the data block is free but the space allocated for the data structure is only sufficient to identify four transactions. Under the condition of Pereira, another row piece would be inserted because the total free space available is below 50%. Under the condition of claims 8 and 20, another row piece is not inserted because there is

insufficient space to identify five transactions -- even though only 25% of the block is being used!

As shown above, Pereira fails to suggest much less disclose many features of claims 8 and 20. Therefore, claims 8 and 20 are patentable. Reconsideration and allowance of claims 8 and 20 is respectfully requested.


#### UNALLOWED DEPENDANT CLAIMS

The unallowed pending claims not discussed so far are dependant claims that depend on an independent claim that is discussed above. Because each of the dependant claims include the limitations of claims upon which they depend, the dependant claims are patentable for at least those reasons the claims upon which the dependant claims depend are patentable. Removal of the rejections with respect to the dependant claims and allowance of the dependant claims is respectfully requested. In addition, the dependent claims introduce additional limitations that independently render them patentable. Due to the fundamental difference already identified, a separate discussion of those limitations is not included at this time.

For the reasons set forth above, Applicant respectfully submits that all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all claims is hereby respectfully solicited.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP



Dated: August 19, 2004

Marcel K. Bingham  
Reg. No. 42,327

1600 Willow Street  
San Jose, CA 95125  
Telephone No.: (408) 414-1080 ext.206  
Facsimile No.: (408) 414-1076

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

on 8/19/04  
(Date)

by Trudy Bagdon  
(Signature)